Background & Fact Sheet

RadScout Nuclear Materials Detector & Analyzer

How RadScout works

- Radioactive material releases energy that the detector measures and then determines the specific material that produced the energy. Specifically, the RadScout locates nuclear materials using a special germanium crystal to detect minute amounts of gamma rays and neutrons that all radioactive materials emit. RadScout was developed within the Lab's B Division nuclear weapons program.

The highly portable RadScout measures and detects energy released by radioactive material. It uses off-the-shelf components and may be available for commercial use soon.

Features

- Highly portable: weighs 18-25 pounds (depending on battery type).
- "Smaller than a bread box," the self-contained, battery-operated, –280°F refrigeration system eliminates need for liquid nitrogen cooling.
- No "white coat factor." Operable by first-responders after a short training session.
- Internal computer with touch-screen functions allows on-board field analysis, including real-time search and isotope identification.
- Memory-stick data storage permits data transmission to remote locations.
- Operates as a portable or can be permanently mounted.
- Can be scaled or upgraded for more specific detection or national security missions.

Deployment

Part of a layered approach that might include a range of capabilities from large, more powerful screening tools, to small, more specific detectors, such as this one.

Commercial availability

- Licensed to a leader in commercialized particle-detection equipment.
- Uses off-the-shelf components and could be commercially available soon.

Contact

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